

## VARYING PREVALENCE OF *TAENIA TAENIAEFORMIS* STROBILOCERCI IN *MICROTUS PENNSYLVANICUS* OF MONTANA

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ABSTRACT.— Of 42 *Microtus pennsylvanicus* trapped 1 km from Bozeman, Montana, 14 (33.3 percent) were infected by strobilocerci of *Taenia taeniaeformis*, while only one (2.1 percent) of 47 was infected at a rural site 16 km from Bozeman. The higher incidence of the primary host, domestic cats, is believed to account for the higher rate of infection near Bozeman.

*Microtus pennsylvanicus* has previously been reported as an intermediate host for *Taenia* (= *Hydatigera*) *taeniaeformis* by Rausch and Tiner (1949, Am. Midl. Nat. 41:665-694), who found 43 of 570 voles in the north central U.S. infected, and by Kinsella (1967, Can. J. Zool. 45:269-274), who found strobilocerci in 2 of 25 voles from western Montana.

Survey data collected in southwestern Montana in 1971 indicated that the prevalence of infection of *M. pennsylvanicus* with *T. taeniaeformis* strobilocerci may vary widely according to the proximity of the voles to large numbers of primary hosts such as the domestic cat.

Voies were trapped from boggy areas on two different sites near the city of Bozeman, Gallatin County, Montana. The first area was located just outside the city limits

and within easy range of numerous house cats. The second area was located approximately 16 km (10 mi) from Bozeman in farm land, with the nearest residence more than 1 km (.6 mi) away.

A total of 42 *M. pennsylvanicus* was trapped from the first area, and their livers were examined for the strobilocerci of *T. taeniaeformis*. Infected voles totaled 14 (33.3 percent positive), with several animals having multiple cysts (an average 1.86 cysts per infected animal). A total of 47 voles was examined from the second area and, of these, one animal (2.1 percent) was found to be infected, with its liver harboring a single cyst.

The low incidence of infection of the rural *M. pennsylvanicus* with *T. taeniaeformis* is attributed to the lack of large numbers of primary hosts in the area.

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